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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/022,722 | 12/20/2001 | Glen Hush | M4065.0481/P481 | 2292 |
| 24998 | 7590 | 03/24/2004 | EXAMINER | |
| DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 2101 L STREET NW WASHINGTON, DC 20037-1526 | | | HOANG, HUAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2818 | |

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|----------------------------|--|
| Office Action Summary | Application No. 10/022,722 | Applicant(s) HUSH, GLEN | |
| | Examiner Huan Hoang | Art Unit 2818 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-4,7,10,11,13-16,25-28,33-37,39,42,43,45-47,52,55-57,62-64,66,69 and 70 is/are rejected.
 7) ☒ Claim(s) 5,6,8,9,12,17-24,29-32,38,40,41,44,48-51,53,54,58-61,65,67,68 and 71 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>02/03/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendment filed on 02/03/04 has been received and entered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-4, 7, 10, 11, 13-16, 25-28, 33-37, 39, 42, 43, 45-47, 52, 55-57, 62-64, 66, 69 and 70 are rejected under 35 U.S.C. 102(a) as being anticipated by Lowrey (Foreign Patent Document WO 01/45108 A1 cited in the IDS filed on 5/23/03).

Lowrey discloses a method for writing to a memory element having all the steps as recited in claims 1-4, 7, 10, 11, 13-16, 25-28, 33-37, 39, 42, 43, 45-47, 52, 55-57, 62-64, 66, 69 and 70 as follows:

- precharging a conductor (column line) to a first voltage value (page 14, lines 7-9), the first voltage being held on the conductor by a capacitor associated with the conductor (page 17, lines 8-9);
- coupling a programmable conductor memory element (M, Fig. 3) between the first voltage on the conductor and a second voltage (page 14, lines 15-21) to write a predetermined resistance state (high or low) in the memory element.

The step of precharging a conductor to a first voltage is disclosed on page 14, lines 7-8 and the step of coupling a programmable conductor memory element is disclosed on page 14, lines 15-21. The voltage difference between the programmable conductor is the second potential difference that is disclosed on page 14, lines 16-18 by varying the value of V_A (page 14, lines 28-30 and page 15, lines 1-4).

Allowable Subject Matter

3. Claims 5, 6, 8, 9, 12, 17-24, 29-32, 38, 40, 41, 44, 48-51, 53, 54, 58-61, 65, 67, 68, and 71 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 6, 8, 9, 12, 17-24, 29-32, 38, 40, 41, 44, 48-51, 53, 54, 58-61, 65, 67, 68, and 71 recite the associated capacitance comprising a capacitor coupled to the conductor, the second voltage being $V_{dd}/2$ and the chalcogenide glass memory element comprising a germanium:selenium glass composition which is doped with silver. The prior art does not teach or suggest the above limitations.

Response to Arguments

4. Applicant's arguments filed 02/03/04 have been fully considered but they are not persuasive.

Applicant states that "a closer examination of Lowrey reveals that the passages cited by the Office Action relate to a method and mechanism for reading a memory cell M having the structure as shown in Fig. 3".

However, both the reading and writing methods associated with the structure of memory cell M in Fig. 3 are disclosed on page 14, line 6 to column 15, line 4. The only difference between the reading method and the writing method is that the potential difference between the memory cell is less than the threshold voltage of the device in the reading operation and is greater than the threshold of the device in the writing operation (page 14, lines 10-21).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2818

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan Hoang whose telephone number is (571) 272-1779. The examiner can normally be reached on Mon-Fri 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Huan Hoang
Primary Examiner
Art Unit 2818

HH
3/21/04.